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HAMS Waywite News

MIDLANDS AMATEUR RADIO CLUB
P.O.Box 1076, HILTON, 3245

March 2007



AFFILIATED TO
THE SARL & IN
ASSOCIATION
WITH THE NATAL
CARBINEERS

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The Chairman's Fax

Well after some really torrid weather there has been a change and hopefully winter will soon be with us.

Your committee is hard at work with the proposed Hobbies Fair at the Drill Hall and a final decision will be taken at the next meeting as to whether we proceed with the proposal.

As far as the repeaters are concerned, co-axial cable is required and we are working on the project in order to save as much as possible. The six metre beacon should be operational by the time this newsletter arrives, thanks to ZS5QB for the reconstruction of the halo antenna.

Due to the fact that the Postnet race will take place on the same weekend as our club meeting, members are advised to remember that the main gates might be locked and you might have to access the meeting from the gates further down Geere Street with parking as indicated to you! Hopefully a full house will be recorded for the meeting.

Some news just to hand is that OM Norman, ZS5YM and his XYL Pat, ZS5YL, will soon be leaving PMB to live in Durban. We wish them well on this move and hope that their stay in their new QTH will be a happy one.

DON'T FORGET THE MEETING ON 17-03-2007

CU there

73 de ZS5MQ

The Club meets on the third Saturday of each month, except December, at 11h00 at the Natal Carbineers Conference Center, Geere Street, PMB. Sunday Morning Bulletins (MARC and SARL) as well as the Club Net from 07h45 on 3620 kHz and the 145.750 MHz repeater

Contributions and comments:
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Sunday Club Net Controller: Mickey Esterhuysen, ZS5QB
National News Bulletin: Robin Seal, ZS5MRS

From the Editor

The XYL visited the library today. This is not an unusual occurrence as it happens on a regular basis. What was interesting was a book entitled “Backyard Projects” that came out of the bag. This opus contains detailed instructions regarding the construction of various walls, fences, paths, patios, benches and chairs that may uplift your standard of living whilst increasing the resale value of your of your property. Sorely lacking in the content is any reference to the construction and /or erection of suitable antenna towers for amateur radio purposes. Now if this does not expose a niche for budding engineering authors, nothing ever will. So, guys, get down to it – I am quite willing to publish your first steps to a successful career in this newsletter!

On a more serious note, our members should consider the idea of organising a Hobbies Fair in PMB as a real challenge. Like our club, most of the other organized hobby activities in the city suffer from a lack of exposure and hence a shortage of members. It is well known that doing something different after the normal 8-to-5 grind takes your mind off the stress and strain of the workplace and makes for a more balanced lifestyle. For those that have completed their stint at the grindstone, a hobby provides constant challenges in both hands-on as well as theoretical activity. This is especially true for the more technical hobbies that tends to keep all the machinery running. The committee cannot do this on their own – such a venture requires commitment from all our members: after all, amateur radio boasts that its adherents come from all walks of life and expertise and that is exactly what we need. Are you in?

I have some bad news for those pessimists that proclaim that Ham Spirit is dead. Two of our new members have produced a mast with guy wires for our Underberg repeater. This not only entails some financial outlay, but more important, some time and effort as well. Our 2m club projects have illustrated this willingness to do do something very well – thank you, guys, we are proud of all of you!

Elsewhere in this issue you will find the rules for the next Walter Reid Constructors Competition and also the guidelines for the judging of the entries. Get out the hacksaws, soldering irons and circuit diagrams and get going – faint heart has never won fair maid!

Wessel, ZS5BLY

THANK YOU

The Midlands Amateur Radio Club wishes to thank:

1. OM Sam, ZS6BRZ of *Radio Accessories and Data Modems* for the donation of a very smart and weatherproof antenna for the Underberg repeater.
2. Johan Lehmann, ZS6JPL of the *Pretoria Amateur Radio Club* for the donation of the repeater control boards as well as a service manual for the Underberg repeater. Dankie, Johan.

VHF and Repeater News.

The new repeater for Underberg has been collected and has been rendered operational by Craig, ZS5CID. (Craig and Wessel have settled the transfer arrangements!) A mast, with wire stays, is also ready thanks to Malcolm, ZR5MRI and Phillip, ZR5PDL. Construction of a suitable power supply is well under way and it should be subjected to a smoke test very soon. Craig is still looking for spares to complete the UHF link transceiver (or another UHF set!).

Thanks to Mickey, ZS5QB, the six metre beacon is ready for installation, halo and all! The 700 repeater is with Don, ZS5DR for some TLC while the Estcourt and Greytown repeaters are awaiting some co-ax to link them to their antennas.

There are rumours that plans are afoot to set up a repeater on the mountains near Wakkerstroom. During past field day excursions it was possible to work stations in Gauteng from that site – are we in for a Durban to Pretoria 2m network?

Walter Reid Constructors Competition

At the last committee and general club meeting it was agreed that some aspects of last year's rules would be changed for the 2007 competition. The main change is that there is **no restriction** on the item to be entered. Any electronic device (preferably with some radio connotation) can be entered, provided that it has not been submitted in a previous Walter Reid competition. Entries may be constructed from scratch or from a kit.

In judging the entries, the following criteria should be considered (a score sheet will be provided at the event):

1. Beginner or expert (previous winners do not qualify as beginners, first entries do)
2. Quality of construction – this includes appearance, ease of operation, workmanship, etc.
3. How useful in the shack?
4. The item must be demonstrated to work as claimed. (exceptions may be made for 3-band 5-element HF Quads and such)
5. Can the item be reproduced? The use of available parts and some documentation is recommended.
6. Presentation: each entrant will be given the opportunity to “introduce and defend” his/her entry.

The “open” or no restriction rule may seem to present a problem in the sense that members are called upon to compare apples with pears. In previous competitions this did not seem to be a problem as most members seem to recognize a winner when they see one.

It was also decided that a Certificate of Participation would be issued to every entrant and that the runner-up would receive a special award.

Should you have any further comments on this issue, please raise them at the next meeting or contact any committee member.

Tips and Tricks

Most power supplies that are used to power the shack transceiver are set to provide a stabilized 12.8V output. Using a voltmeter that shows 0 – 15 V may make it rather difficult to read this value with any accuracy. To overcome this, place a 10 V zener diode in series with the meter and change the scale to read from 10 V to 15 V instead.

When constructing high current power supplies, that is when you are using a smoothing capacitor in the order of 60 000 μ F or more, remember to add a bleeding resistor across the capacitor or else beware of the charge that lurketh in such a device!

The lumps in discarded computer monitor cables contain toroids which make excellent RF suppressors. They fit nicely over the TV co-ax and make for good neighbour relations.

In the light of the forthcoming Walter Reid competition, the following tip from the September 2000 issue of QST may come in handy:

Making labels for home brew equipment:

1. Typewrite or print the labels on paper
2. Photocopy the the labels on a transparency
3. Trim the labels to size
4. Glue the labels to the equipment
5. Coat with a clear spray

Robots and Robotics

Man has been toying with the idea of somehow building a mechanical version of himself long before work was started which eventually led to the successful introduction of an industrial robot in the early sixties. Throughout recorded history man has had a preoccupation with sentient machines made, at least partially, in his own image. In the ancient Greek myths, the god of fire, Hephaestus, was supposed to be accompanied and aided by two pure gold living statues. He later constructed a brass giant, Talus, to guard Crete against all intruders. In real life, but still over two thousand years ago, Hero of Alexandria wrote his *Treatise on Pneumatics* in which he described a large number of automata such as moving figures and singing birds. It is remarkable that these sophisticated toys were the only use ever made of pneumatics for centuries.

About 1500, Leonardo da Vinci built a mechanical lion in honour of Louis XII which, when the king entered Milan, moved forward, clawed open its chest, and pointed at the coat of arms of France! Such mechanical automata remained the vogue for the next four centuries, with ever increasing complexity. It was not until the early twentieth century that the word 'robot' came into the English language from the translation in 1923 of a Czech play *RUR (Rossum's Universal Robots)* by the philosopher Karel Capek. The term 'robot' itself is derived from the Czech "robota" meaning "compulsory labour" and from 'robotnik' meaning 'serf'. Although the creations in the play would now be termed 'androids' rather than robots the misuse of the word is universal.

The word 'robotics' was invented by master science fiction writer Isaac Asimov in his now classic robot stories, which at the time of writing, were unusual in that they told of robots which not only did not harm humans, but actually helped them! It was in one of these stories called '*Runaround*', which appeared in the March 1942 issue of '*Astounding Science Fiction*', that Asimov first proposed the famous Three Laws of Robotics.

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.
2. A robot must obey the orders given to it by human beings except when those orders would violate the First Law.
3. A robot must protect its own existence, except where that would violate the First or Second Law.

Although Asimov did not realize it at the time, this was the first printed appearance of the word 'robotics'. Joe Engelberger, founder of Unimation and considered by many to be the father of modern industrial robotics, has pointed out that the Three Laws remain worthy design standards for roboticists to this day.

So what is a robot? From the confused usage of the word 'robot' since *RUR*, conceptions vary of what a robot actually consists of. Even when it comes to the comparatively recent concept of the 'industrial robot' there is no international agreement about definitions – it is comparatively arbitrary where the boundaries of the term is drawn. As regards actual definitions for a robot, various ones have been adopted. The common usage of the word seems to include all those machines which wholly, or in part, imitate man – sometimes his appearance, sometimes his actions, and sometimes both. Clearly, however, a more concrete definition is required. The Japanese Industrial Robot Association (JIRA) divides the term 'robot' into six ever more sophisticated classes: manual handling devices, pick-and-place devices, programmable variable-sequence manipulators, robots taught manually, robots controlled by a programming language and robots that can react to their environments.

In Europe and the USA the term 'industrial robot' does not include the first two classes. Instead it tends to be defined as 'a re programmable device designed to both manipulate and transport parts, tools, or specialized manufacturing implements through variable programmed motions for the performance of specific manufacturing tasks'. In an effort to overcome this confusion the Japanese have coined the global term *mechatronics* to refer to the undergoing linkage of mechanics with electronics that is present in all these technologies.

[From: *The Robotics Revolution* by Peter B. Scott. Next month we look at the robot arm. Ed.]

Competition

[open only to members of MARC]

As radio amateurs we celebrate Marconi Day, measure amps and volts and make up resistances of non-standard ohmic values. We use capacitors and inductors, measure their values and construct oscillators of various types. Most of the units that we use are named after the men that did important work in their respective fields and we know most of them by their surnames. But what were their Christian names?

In the form below, fill in the first name/names of these gentlemen and hand in the form at the May meeting of MARC, e-mail and snail mail entries will also be accepted. The first correct entry to be received will win a free MARC software CD.

Tear off along dotted line

.....

<i>Device / unit/ process</i>	<i>Surname of person</i>	<i>First name/names</i>
Current		
Potential difference		
Resistance		
Magnetic flux density		
Electric charge		
Frequency		
Admittance		
Power		
Force		
Spectrum analysis		
Energy		
Temperature (SI)		
Gain-frequency graph		
Split capacitor oscillator		
$\delta^2/\delta x^2 + \delta^2/\delta y^2 + \delta^2/\delta z^2$		

NAME:.....

Call sign.....

Bulletin Readers

March 18	Mike	ZS5BGM
March 25	Wessel	ZS5BLY
April 01	Rod	ZS5RK (sorry Rod!)
April 08	Craig	ZS5CID
April 15	Bert	ZS5MQ
April 22	Mike	ZS5BGM
April 29	Wessel	ZS5BLY

On the Giggle-Hertz Bands

A wife invited some people to dinner. At the table, she turned to their six-year old daughter and said, "Would you like to say the blessing?"
"I wouldn't know what to say," the girl replied.
"Just say what you heard Mommy say," the wife answered.
The daughter bowed her head and said:
"Lord, why did I invite all these people to dinner."

They said it

Any fool can tell the truth; but it requires a man of
some sense to know how to lie well.

Samuel Butler

Sometimes it is that searchers spot
The kind of thing they'd rather not.

Lessing
(from *Nathan der Weise*)

An archaeologist is the best husband a woman can have;
the older she gets, the more interested he is in her.

Agatha Christie

Next Meeting

The next meeting of the club will take place on Saturday, 17th March at 11:00 at the usual venue. We are hosting a guest speaker and will also discuss the proposed Hobbies Fair, finalise Walter Reid and some repeater matters

MARC software CD

Like Christmas, this is also coming. I am busy with the final assembly and may ask for one or two volunteers to do a beta-test on the disc.

